

Invasive MRSA Infections

- **Data source:** CDC’s Emerging Infections Program (EIP) Active Bacterial Core Surveillance (ABCs) active laboratory and population-based surveillance for invasive MRSA infections
- **Definition:** <http://www.cdc.gov/abcs/index.html>
 - Invasive MRSA infection: isolation of MRSA from a normally sterile body site in a resident of the catchment area
 - Healthcare-associated (HCA) invasive MRSA infections include:
 - Hospital Onset (HO): hospitalized resident of catchment area whose invasive MRSA culture was collected ≥ 3 days after admission
 - Healthcare-associated community-onset (HACO): Hospitalized resident of catchment area whose invasive MRSA culture was collected < 3 days after admission and has any combination of the following healthcare exposures:
 - Dialysis, prior hospitalization, surgery, or residence in a long-term care facility in the previous year
 - Central vascular catheter in place at any time in the 2 days prior to initial culture
- **5-Year (2013) National Prevention Target:** 50% reduction in incidence of healthcare-associated invasive MRSA infections
- **Metric:** Rate per 100,000 persons
 - Rate adjusted for age and race.
- **Baseline period:** 2007-2008
- **Baseline data:**
 - 9 EIP ABCs catchment areas: CA, CO, CT, GA, MD, MN, NY, OR, TN
 - Current catchment population: ~19 million

Baseline (2006-2008) and 2009 (Preliminary) Data:

Category	Disease Rate (per 100,000 persons)*			Estimate of Cases [†]		
	Baseline	2009	% Change	Baseline	2009	Difference
HCA (all)	26.24	22.72	13.4	79,463	69,085	10,378
HO	7.66	6.07	20.8	23,187	18,464	4,723
HACO	18.57	16.65	10.3	56,235	50,630	5,605

* Age- and race-adjusted

[†] Age- and race-adjusted; projected to nation using U.S. census population

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Table 4. Incidence of Invasive Methicillin-Resistant *Staphylococcus aureus* Infections, by Select Demographics and Epidemiological Classification, Active Bacterial Core Surveillance/Emerging Infection Program Sites, by Year, 2005-2008

Demographic	Incidence per 10 000 ^a															
	Actual Count				Health Care-Associated								Total Health Care-Associated			
	2005	2006	2007	2008	Community-Onset				Hospital-Onset				2005	2006	2007	2008
Sex																
Male	2679	2592	2611	2314	2.54	2.49	2.52	2.17	1.14	1.04	0.98	0.91	3.69	3.53	3.51	3.08
Female	2038	1887	1752	1635	1.82	1.70	1.55	1.53	0.89	0.78	0.72	0.57	2.71	2.48	2.27	2.10
Age, y ^b																
<1	48	56	41	41	0.34	0.50	0.43	0.47	1.90	2.16	1.42	1.37	2.24	2.66	1.85	1.85
1	1	5	4	3	0	0.20	0.10	0.19	0.10	0.20	0.19	0.05	0.10	0.40	0.29	0.24
2-4	11	11	15	7	0.08	0.07	0.16	0.08	0.11	0.11	0.66	0.03	0.20	0.18	0.23	0.11
5-17	26	7	22	25	0.06	0.02	0.05	0.06	0.04	0.02	0.04	0.04	0.10	0.03	0.09	0.10
18-34	312	307	293	267	0.57	0.57	0.58	0.53	0.34	0.33	0.28	0.25	0.91	0.90	0.86	0.77
35-49	909	862	779	680	1.88	1.72	1.56	1.29	0.68	0.68	0.59	0.54	2.57	2.40	2.15	1.83
50-64	1208	1216	1253	1196	3.24	3.15	3.27	2.75	1.50	1.39	1.24	1.20	4.73	4.54	4.50	3.95
≥65	2202	2014	1956	1808	9.24	8.77	8.15	1.83	4.31	3.43	3.50	2.67	13.56	12.2	11.65	10.50
Race ^c																
White	2436	2315	2253	1991	1.54	1.49	1.44	1.32	0.78	0.72	0.67	0.54	2.33	2.21	2.12	1.86
Black	1760	1627	1640	1442	4.30	3.90	3.92	3.29	1.70	1.50	1.40	1.35	6.00	5.39	5.33	4.65
Other	136	150	137	145	0.59	0.75	0.60	0.70	0.33	0.26	0.30	0.20	0.93	1.01	0.90	0.91
Overall	4717	4479	4363	3949	2.20	2.10	1.97	1.88	1.02	0.92	0.83	0.75	3.21	3.00	2.80	2.63

^aSex-, age-, and race-specific rates are crude rates among all 9 Emerging Infection Program sites. Overall incidence rates are point estimates for each year using the modeled incidence adjusting for age (<65 vs ≥65 years) and race (black vs nonblack).

^bAge is missing from 1 case in 2006 and 2 cases in 2008.

^cRace of unknown origin was excluded from race-specific calculations.

Table 4 from: Kallen AJ, Mu Y, Bulens S et al. Health Care-Associated Invasive MRSA Infections, 2005-2008. JAMA. 2010 Aug 11; 304(6): 641-648.